

The Future Role of Thrift Institutions in Mortgage Lending

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I. Introduction

The knowledge, skills, and expertise that Savings and Loan Associations (S&Ls) maintain in originating mortgage loans are among their most important assets. Indeed, for some institutions this expertise may be among the few remaining assets. Given the severe operating losses that S&Ls have suffered in recent years and their necessarily cloudy future, the mortgage-lending strategies that S&Ls select now could have a substantial impact on the future form of their institutions, and even the likelihood of their continuing existence. This paper, therefore, surveys the alternative mortgage-lending strategies that are available to S&Ls, and analyzes their likely costs and benefits.

An evaluation of mortgage-lending alternatives for S&Ls, of course, cannot be made independently of other factors affecting these institutions. These factors include the nature and volume of future deposit flows, changes in the mortgage market from restructuring, and the national economy including interest rate trends. These topics are discussed in Section II of the paper. It should be noted that the Section II discussion is primarily directed to spelling out the assumptions being made in this paper, not to arguing the case that these assumptions are "right."

Section III discusses some alternative mortgage strategies that are available to S&Ls. I consider "portfolio lending" and "mortgage banking" the two main alternatives. *Portfolio lending* is defined as a situation in which an institution accepts deposit funds, and invests them directly in a maintained portfolio of mortgage loans. *Mortgage banking* is defined as a situation in which an institution originates mortgage loans but sells them promptly, with its only continuing function that of "servicing" the contracts. It is possible, of course, that S&Ls could eliminate their mortgage-lending activities entirely, but this would cast out what is clearly among an S&L's most valuable assets—its expertise in mortgage origination.

Beyond the basic strategy choice between portfolio lending and mortgage banking, there are many questions concerning the specific manner in which S&Ls might pursue these lending options and the form of the mortgage contracts that would be used. These topics are also discussed in Section III.

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II. The Background for S&L Mortgage-Lending Decisions

The Good Old Days Are Gone

S&L mortgage-lending strategies between World War II and the present can be briefly described as follows:

1. S&Ls obtained deposit funds in short and intermediate maturities at rates generally below capital market interest rates on instruments of comparable maturity;
2. Essentially 100 percent of these funds were invested in fixed rate, long-term, mortgages at interest rate levels comparable to those on other long-term capital market instruments;
3. The interest rate spreads between the new issue yield on mortgage assets and the average cost of funds generally covered operating costs amply. Large spreads were obtained both because deposit funds were available at below market rates, and because, given an ascending yield curve environment, short-term deposit rates were distinctly below long-term mortgage rates.

The profitability of this strategy depended on a sufficient return-cost spread, both at the time of the loan origination and over the life of the mortgage asset. Although this condition was basically maintained throughout the 1950s and into the 1960s, the situation began to deteriorate in the mid 1960s, and it has been a disaster in recent years. Specifically, interest rate levels have risen dramatically over all maturity ranges, and descending yield curves have been common, if not the norm. The general rise in interest rate levels has created a negative spread for most institutions on their portfolio of existing mortgages, and the inverted yield curve makes it difficult to avoid a small or negative spread even on newly issued mortgages.

Thus, to summarize, the following conditions appear necessary for S&Ls to maintain their traditional mortgage-lending practices with the degree of success enjoyed earlier:

1. Access to deposit funds at below capital market interest rate levels;
2. An ascending term structure of interest rates, or at worst, flat yield curves;
3. Limited risk of significantly rising interest rate levels over the life of the mortgage contracts held.

The analysis of Section III below presumes that the outlook for these conditions to occur during the 1980s is not very good. Since our appraisal of alternative strategies depends on exactly how the listed conditions are violated, it is useful to analyze these conditions further before turning to a discussion of the alternatives.

Access to Deposit Funds at Below Market Rates

S&L access to sources of deposit funds at below market rates derived from what might be termed the three "C's" of deposit banking: convenience, confidence, and (lack of) competition. Convenience was provided in terms of ample numbers of branch units, and generally well-staffed offices.

Confidence was based both on federal insurance of deposits, and the appearance of reliability embodied in pillared facades and the like. The lack of competition was nurtured by regulation, by a fear on the part of other depository institutions of "spoiling" their own deposit markets, and by a simple lack of interest by capital market institutions.

These three C advantages of S&Ls in gathering deposits have been largely lost, and in my view are unlikely to be regained. Regarding convenience, physical access to branch units is considered a disadvantage by many now in view of rising transportation costs and a higher opportunity cost on time (as real wage rates rise). Telephone, mail, and wire transfer appear the cost-effective modes for deposit banking. For example, ironically many thrifts and banks now find queues forming in front of automated teller machines, while real live tellers stand unused.

While the factors that created confidence in thrift institutions such as federal insurance and thick pillars are by and large still standing, it appears that the consumer either values or trusts them less today. The well-publicized plight of S&Ls and the significant number of failing institutions perhaps have created these doubts. Whatever the reason, it is clear that consumers today do not view S&Ls as a distinctly safer place to invest money than, say, the uninsured and quite anonymous money market funds.

Finally, since 1962 with bank entry into active competition for certificates of deposits, the competitive situation has been progressively worsening for S&Ls. Money market funds, removal of Regulation Q ceilings (current and forthcoming), and the potential for further entry of capital market entities (Sears, for example) make it clear that fierce competition is likely to be the norm.

In summary, it appears highly unlikely that S&Ls will regain during the 1980s their ability to attract deposit funds at rates significantly below market levels. It is also noteworthy that, at least in the present environment, the maturity of S&L deposits has been shortened considerably, and it is problematic how much they will lengthen these maturities even in a more favorable yield curve environment. To be clear, I do expect that S&Ls will retain some rate advantage, and I am hopeful they will lengthen their deposit maturities. But the analysis in Section III follows the assumption that S&L mortgage strategies for the 1980s must be based on an extremely cautious appraisal for major improvement in these matters.

The Interest Rate Outlook

The other two conditions listed above as necessary for traditional S&L mortgage-lending activities—stable interest rate levels, and ascending yield curves—are also clearly absent in the current situation. This situation, of course, could change rapidly, and the current Reagan economic plans certainly presume that it will. But whatever happens in the short or intermediate run, it appears unlikely that a long-term period of stable interest rate levels and ascending yield curves can be *confidently* anticipated by market participants. Regulations are also likely to make it difficult for institutions to pursue investment strategies based on declining interest rate levels—the

recent Federal Home Loan Bank Board regulations against S&Ls taking long positions in interest rate futures contracts is an example. And the "market" is unlikely to purchase debt instruments of S&Ls that base their decisions on such optimistic conditions—the current difficulty of S&Ls in issuing commercial paper and jumbo CDs are examples here. Thus, even were interest rate levels to decline and stabilize, it is unlikely that many S&Ls could carry out investment strategies that presumed such an outcome would occur.

Restructuring the Mortgage Market

The mortgage market has been undergoing changes not experienced in such magnitude since the Great Depression. Some of the changes are intentional and beneficial, while others are spontaneous and potentially dangerous. They have an impact on both the feasibility of S&Ls carrying out mortgage-lending operations in their traditional manner, and the choice of the alternative lending strategies that are available. In this section we briefly survey a set of these changes that have direct impacts on S&Ls.

The Status of S&L Mortgage Lending

It is useful first to review the trends in recent S&L mortgage-lending activity. Relevant data are shown in Table 1 from 1970 to 1980. The first two columns show the S&L share of total mortgage lending in terms of mortgage originations and mortgage holdings. The S&L mortgage origination share peaked in 1976 at close to 55 percent of all originations, but has declined significantly since then. Currently the ratio is about 46 percent. Essentially the same pattern holds for mortgage holdings, with S&Ls currently holding about 48 percent of all mortgages outstanding. It is noteworthy that the origination ratio is below the holding ratio for the last three years. Were this to continue, then in the absence of net purchase or sales of existing mortgages, the holding ratio would necessarily decline further.

The third column of Table 1 shows the ratio of S&L mortgage origination activity to a measure of S&L cash flow. The cash flow in the denominator of this ratio is the sum of S&L net new deposit flows and mortgage repayments. The ratio has risen dramatically since 1975, and currently is near its peak. Thus, S&Ls currently are originating a large volume of mortgages relative to their cash flow. It is particularly striking that even with this high ratio, the S&L share of total mortgage originations has been declining as shown in column 1 of Table 1. The upshot, of course, is that S&L cash flow in recent years has not been adequate for the institutions to maintain their traditional share of the mortgage market. In Section III below some solutions for this dilemma are discussed.

Table 1
S&L Mortgage Lending Activity (Percent)

	<u>S&L Organizations</u> Total Originations	<u>S&L Holdings</u> Total Holdings	<u>S&L Organizations</u> S&L Cash Flow ¹
1970	42	46	95
1971	46	47	75
1972	48	49	84
1973	49	50	122
1974	46	50	134
1975	53	50	81
1976	55	51	96
1977	53	52	121
1978	49	51	138
1979	44	49	159
1980	46	48	148

Source: HUD Survey of Mortgage Lending and FHLBB *Journal*.

¹SLA Cash Flow = Net New Deposit Flows + Mortgage Repayments.

The Rise in Secondary Market Trading of Mortgage Instruments

The term "secondary trading" has a rather special meaning in mortgage markets. For most capital market instruments, "secondary" trading refers to the transfer of "seasoned" securities, after they have been distributed through the underwriting process. In mortgage markets, in contrast, "secondary" trading usually refers to the transfer of newly originated loans to a holder other than the originator. Secondary trading of mortgages is thus analogous to the initial underwriting and trading of most other instruments. Secondary trading of newly originated mortgages is not confused with trading of seasoned mortgages, mainly because very little of the latter occurs.

Table 2 shows data that measure the activity level in the secondary mortgage market. Mortgage pools refers to groups of mortgages that are accumulated into a package and then sold as a mortgage-backed security. Government National Mortgage Association (GNMA) with its passthrough program, Federal Home Loan Mortgage Corporation (FHLMC) with its participation certificate program, and the Farmers Home Administration are the largest participants. The mortgage pools outstanding at year-end 1980 for these three institutions were \$132 billion, and their purchases during 1980 for pooling totaled \$27 billion. Private institutions, including S&Ls, commercial banks, and private mortgage insurance companies, also carry out pooling activities or issue mortgage-backed securities. The volume of activity to date from these other sources has not been large—typically about \$1 billion a year—but the potential for growth is great.

Table 2
Measures of the Secondary Mortgage Market
 One to Four Family Homes, 1980 (Billions of dollars)

	Mortgages Outstanding	Gross Mortgages Acquired
Mortgage Pools	132	27
Federal Credit Agencies	87	19
SubTotal	219	46
(As % of total)	(15%)	(23%)
Total	1451	201

Source: Mortgages Outstanding: *Federal Reserve Bulletin*.
 Mortgages Acquired and Originated: *HUD News*.

Federal credit agencies refers to institutions that directly purchase mortgages and are related in one form or another to the government. FNMA is the largest institution in this group, but GNMA, FHLMC, and the Farmers Home Administration are also active in this area. It should be noted that several of the agencies function both in pooling activity and in direct purchase activity. Federal credit agencies held \$87 billion in mortgages at year-end 1980, and acquired \$19 billion during the year. State and local governments also carry out significant agency purchases.

Mortgages outstanding reached almost \$1.5 trillion at year-end 1980. This total includes the mortgage pools, federal credit agency holdings, the holdings of depository institutions, insurance and pension funds, state and local governments, and individuals. Mortgage pools and federal credit agencies represent about 15 percent of this total. But this is a minimum estimate of the secondary market as measured by total holdings, since at least \$200 billion of the other holdings are by individuals or institutions that themselves do not originate mortgages. Thus, at least 30 percent of the mortgages outstanding at year-end 1980 were acquired through secondary purchases.

A total of \$46 billion of mortgages was acquired during 1980 through mortgage pools and federal credit agency purchases, and this represents about 23 percent of the total mortgage acquisitions during the year. But again, this percentage definitely understates the size of the secondary market, and it is reasonable that about 50 percent of the approximately \$200 billion of mortgages acquired during 1980 involved secondary market transactions. Given that secondary market activity was very small 10 years ago, that 30 percent of the outstanding mortgages were acquired through secondary market purchases, and that perhaps 50 percent of the 1980 activity involved secondary market purchases, it is clear that the secondary market is growing rapidly.

Ken Rosen and I have studied the reasons for this rapid growth in the secondary market in two recent papers.¹ We attribute the growth in the secondary market primarily to a shortfall in the supply of mortgage credit from traditional depository institutions relative to the demand for such credit by household borrowers. Specifically, we have constructed an index number of the gap between the mortgage supply of depository institutions and other traditional mortgage holders and the household demand. Historical values from 1970 to 1980 and forecasted values from 1981 to 1990 of this demand/supply gap are shown in Table 3.² It can be seen that the gap shows cyclical movements during the 1970s, but with a significant uptrend in recent years. We anticipate that this gap will rise secularly during the 1980s, and thus create a strong demand for additional secondary market activity. In particular, major purchases of mortgage instruments by holders that do not originate mortgages such as individuals and pension funds are necessary during the 1980s if the actual demand and supply for mortgage credit are to be equilibrated.

Table 3
The Mortgage Demand/Supply Gap (Percentage of Demand)

Historical		Forecast	
1970	9	1981	21
1971	-19	1982	24
1972	-18	1983	27
1973	7	1984	30
1974	18	1985	32
1975	-15	1986	34
1976	-7	1987	36
1977	6	1988	38
1978	20	1989	40
1979	27	1990	41
1980	25		

Source: Dwight M. Jaffee and Kenneth T. Rosen, "The Demand for Housing and Mortgage Credit: The Mortgage Credit Gap Problem."

Mortgage instruments, of course, will have to be attractive in terms of yield and other instrument features to entice potential buyers into the secondary market. As one measure of the potential changes that will be necessary, Rosen and I estimated historically that part of the response in the mortgage rate—bond rate spread that is due to changes in the mortgage

¹Dwight M. Jaffee and Kenneth T. Rosen, "The Use of Mortgage Passthrough Securities," in *New Sources of Capital for the Savings and Loan Industry*, Federal Home Loan Bank of San Francisco, 1980.

Dwight M. Jaffee and Kenneth T. Rosen, "The Demand for Housing and Mortgage Credit: The Mortgage Credit Gap Problem," *Housing Finance in the Eighties: Issues and Options*, FNMA, 1981.

²See references in footnote (1) for details on the construction of the demand/supply gap index.

demand/supply gap. Based on this response, we estimate that mortgage interest rates will have to rise from 2 to 3 percentage points relative to other long-term interest rates during the 1980s to attract new secondary market purchasers. In the absence of such a major relative rate increase, it would appear that a serious shortfall in mortgage credit supply will appear during the 1980s.

Adjustable Rate Mortgages

Adjustable rate mortgages (ARMs) represent a second major innovation in mortgage markets. Such contracts relieve the mortgage holder of the interest rate volatility risk that arises on a fixed rate mortgage instrument. Flexible rate mortgages had their first major marketing thrust with the California variable rate mortgages. Although these variable rate mortgages were highly regulated, and thereby offered only modest interest rate flexibility, currently institutions have the authority to offer contracts with a large range of potential rate movements. These contracts can thus significantly reduce the effective maturity of new mortgages, thereby reducing the interest rate risk for depository institutions that finance holdings of their mortgages with short-term deposits.

In my view, however, there are major pitfalls to ARMs, and I do not see these contracts as the solution during the 1980s to either the demand/supply gap described above or as the mechanism for continued holding by S&Ls of their traditional share of mortgage instruments. The key problem is that interest rate risk, with one exception, is a zero sum game between the borrower and the lender; what the lender does not bear, the borrower does.³ And the household sector is in no better position to bear this risk than the lender, and probably is less well-situated.

The one exception to the zero sum game arises if the interest risk is sold to the "market," as would occur if either the borrower or lender hedged his position through a short position in interest rate futures or options. Such hedging would be best carried out by the lenders, since they are better situated for carrying out the hedging transactions. Therefore, as discussed in Section III below, one mortgage strategy for S&Ls is to originate fixed rate mortgages, but hedge the interest rate risk.

Given the rational consumer reluctance to bear the interest risk on unhedged ARM contracts, ARM originators have had to make concessions to entice the borrowers to participate in the contracts. One enticement is to offer the loans at yields low relative to short-term capital market interest rates and relative to fixed-rate mortgage offerings. For example, consumers do appear to be attracted to ARM contracts offered at rates roughly equal to the rates on Treasury bills of a comparable effective maturity. It is unclear to me, however, how institutions can obtain any operating spread given that their liabilities are tied to the same market rates.

³It is sometimes suggested that borrowers can already hedge interest rate risk because they own inflation sensitive housing assets. Recent experience with rapidly rising real interest rates, however, illustrates why this is not valid, especially for cash-flow constrained households.

Another marketing approach for ARM-related mortgages are "dual rate" mortgages. These contracts use one interest rate, sometimes called the "accrual" rate, to determine that part of the borrower's payment that is interest (not principal repayment), and a second rate, the "payment" rate, to determine the size of the payment (including normal long-term amortization). If the payment rate is lower than the accrual rate, then the payment size is lower than it would be on a conventional contract, and thus the instrument is attractive to borrowers even if the rates are adjustable. The pitfall to these instruments is their potential for negative amortization, which will occur if the payment is actually less than the interest accrual based on the accrual rate. This creates a potential for default if housing prices fail to rise sufficiently to cover the negative amortization.

Dual rate mortgages, thus, tend to eliminate the interest rate risk for the lender, and at least offset this risk for the borrower with attractive payments, but add a significantly larger measure of default risk than would occur under conventional mortgages. If this default risk remains with the mortgage holder, then it is unclear whether the tradeoff between rate risk and default risk is worthwhile.⁴ Mortgage insurance may, however, provide a solution in that if private mortgage insurers feel they can insure the default risk on the instruments, then the lender will truly have reduced its net risk position. In this sense, an insured dual rate mortgage, like hedging the interest rate risk on a fixed rate instrument, creates a potential net gain by selling the risk to a third party.

In concluding this section, graduated payment mortgages (GPMs) should be noted as another major innovation in mortgage contracts. GPM mortgages provide an innovative solution to the "affordability" problem of first-time home buyers who cannot qualify for standard fixed payment mortgages. The attractiveness of the instrument is primarily for the borrower, however, since the interest rate risk of the instrument is unchanged by its GPM aspects, and the default risk actually rises because the amortization is less in the early years of the contract (sharing this feature with the dual rate instruments). Some innovative lenders are now combining graduated payment features with dual rate ARM contract features, and this could well expand the market for the dual rate instruments without adding any negative problems.

Creative Financing

The last set of mortgage market innovations to be discussed here concern the so-called "creative financing" that has received major publicity in the last few years. Table 4 shows data that provide at least a preliminary measure of how important this activity has been.

The first column of Table 4 shows the ratio, as a percent, between the dollar volume of new home mortgage originations and the dollar value of new home housing starts. The value of mortgage originations in the numer-

⁴Given a choice between interest rate risk and default risk, it may be better for S&Ls to bear default risks since to some extent this is within their control.

Table 4
Ratio of Mortgage Originations to Value of Housing Activity (Percent)

	New Homes	Existing Homes	All Units
1968	64.3	58.1	60.6
1969	62.8	58.5	60.1
1970	58.1	55.5	56.4
1971	63.0	66.1	64.8
1972	64.6	73.8	70.4
1973	69.5	66.6	67.6
1974	69.8	53.3	58.2
1975	64.4	55.8	58.2
1976	57.4	63.6	61.7
1977	59.0	68.0	65.2
1978	64.7	59.2	60.8
1979	70.7	53.3	57.9
1980	74.8	39.6	47.9
Mean value	64.8	59.3	60.8

Sources: HUD for mortgage originations; U.S. Bureau of Census for housing starts; National Association of Realtors for existing home sales; Federal Home Loan Bank Board and U.S. Bureau of Census for house prices.

ator covers only institutional originators, and thus would exclude creative financing. The denominator is a measure of the total value of new construction that could be financed. The mean value for the ratio between 1968 and 1980 is 65 percent. This is reasonable since historically about 15 percent of all home sales are completed without any mortgage financing, and the remainder is financed with average loan-to-value ratios in the 70 to 75 percent range.

The new home ratio in Table 4 has been rising steadily since 1976, and has been above its historical average since 1979. High values for the ratio imply *less* creative financing, since the institutional proportion is higher. Thus within the new home component, the trend is actually away from creative financing in recent years. This is consistent with the prevalence of "buy-down" financing by builders in recent years, in which the builder subsidizes the cost of the mortgage for some period as an inducement to the purchaser. With such inducements available, it is understandable that a higher than normal percentage of new home buyers are using traditional (and here subsidized) mortgage financing.

The second column shows the ratio for existing home sales calculated using the same principle used for new homes. The mean value for existing home sales is 59 percent between 1968 and 1980, reflecting slightly lower loan-to-value ratios than for new home purchases. The existing home ratio, however, has been declining since 1977, and has been below its historical average since 1979. Most importantly, the ratio shows a major decline of over 13 percentage points in 1980. Preliminary data for 1981 indicate even further declines. The recent decline in the ratio for existing home pur-

chases is fully consistent with a major role of creative financing. Specifically, the full differences between the historical average for this ratio (59 percent) and its 1980 value could be reasonably attributed to this source. This would imply that about 20 percent of existing home sales during 1980 were financed "creatively" rather than traditionally. During 1981 the ratio is likely to be even higher.

It is not necessary here to detail how creative finance can work, but two points are important. First, a large proportion of this financing involves "mortgage assumptions," in which the buyer takes over the mortgage previously maintained by the seller. Currently, about 18 states are allowing such assumptions, and there are many court cases both to extend and to roll back assumption activity. Second, most creative financing uses some form of short-term financing to bridge the current period of high rates. At some point these loans will have to be refinanced, and the potential demand on the mortgage market at that time could be great. This rollover demand for mortgage credit will be in addition to any regular demand, and thus brightens even further the market for institutions originating these loans.

III. Strategies for S&L Mortgage Lending

In this section we discuss two main strategies and other related issues concerning S&L mortgage lending during the 1980s. As discussed in the previous section, we assume for the purposes of this discussion that S&Ls will have difficulty regaining access to below market rate sources of deposit funds, that there will not be major lengthening of the maturity of these deposits, and that the interest rate outlook will remain clouded. It should also be recalled that currently S&Ls are originating considerably less than their traditional share of total mortgage originations, although the ratio of S&L originations to their cash flow remains at extremely high rates.

Portfolio Lender Strategies

It is appealing to S&Ls to continue their traditional role of portfolio lender—that is, holding originated loans in their own portfolio—if for no other reason than the costs and uncertainty associated with any change. The problems of continuing this historical course have been discussed above, in terms of low return-cost spreads, and the interest rate volatility risk associated with maturity imbalances. Adjustable rate mortgages do appear as one solution, and it is likely that most portfolio lending being carried out today is, in fact, based on such short-term mortgages. But I remain concerned, as discussed above, that such contracts may have the end effect of simply replacing interest rate risk with default risk for S&Ls. For this reason, efficient solutions are more likely to rely on "selling" the interest rate or default risk to third parties. Thus, private mortgage insurance of "dual rate" mortgages does appear a possible solution. Here I want to discuss another route for maintaining portfolio lending activities, while still relying on long-term, fixed-rate, mortgages.

The basic idea is for the institution to originate and hold in its portfolio the conventional, fixed rate mortgage, but then hedge its interest rate exposure by taking an offsetting short position in the interest rate futures markets. The hedge allows the institution to balance its asset liability maturities without explicit matching.

The nature of this strategy can be understood first by considering a special "prototype" situation. More complicated situations can then be briefly noted. The prototype situation has an institution that originates or purchases a new GNMA passthrough security. The GNMA is used because futures markets currently exist for these instruments. The institution finances this asset position with one-year deposit liabilities at essentially market interest rates.

The hedging transaction is to sell short a comparable position in GNMA futures for delivery one year ahead. This means that the institution has contracted to deliver the GNMA securities one year from now at a price established today. The price is determined by the auction process at the exchange and would reflect current market conditions and expectations currently held for the future path of interest rates. Conceptually, once the mortgage portfolio position is obtained, and the short position in the futures market taken, no further action is required for the year. At the end of the year, the GNMA portfolio is delivered to satisfy the futures contract, and the deposit liabilities are repaid.

The key benefit of the strategy for the institution is that its return on the mortgage portfolio, including the short futures position, is locked in at the initial date. The return is determined by the purchase price of the portfolio holdings, the sale price of the futures position, and the current return on the portfolio. All three of these factors are known at the initial date, and thus the total return, including coupon yield and capital gain or loss can be calculated as a percentage of the investment. Similarly, the institution's cost of funds is known for the one-year period, and thus the net spread can be determined with certainty. There is thus no interest rate risk from the lender's standpoint. Equally important, the borrower receives a traditional, fixed rate mortgage. Effectively, the lender has converted the fixed rate mortgage granted to the borrower into an adjustable rate mortgage by using the futures markets.

The key question concerning the efficacy of the strategy is whether the achieved spread is sufficient to cover the institution's operating costs and profits. The problem is that the hedging strategy provides the institution with essentially a net one-year yield, comparable to other capital market one-year yields. To the extent that the liability position is funded at similar one-year rates, the spread could be negligible. To obtain a sufficient spread, one of two conditions must be met:

1. The institution must obtain below market cost funds.
2. Mortgage interest rates must be high relative to other capital market rates.

As discussed above, the outlook on the first condition is not bright in my view, but it does remain a possibility. Relatively high mortgage rates, on the other hand, are quite likely. The discussion of the rising mortgage de-

mand/supply gap, for example, suggested that mortgage rates may rise 2 to 3 percentage points relative to other capital market rates in coming years. In this case, even with market costs for funds, a sufficient spread could be achieved.

Finally, let me note some of the technical questions that arise with such hedging strategies:

1. Length of the Planning Period. Futures contracts on GNMA securities are currently available from the near month out to about three years. Thus, positions funded with deposits from one to three months out to about three years in maturity could be hedged under this approach.
2. Closing the Position. Although the strategy was described in terms of delivering the mortgage portfolio and allowing the deposit liabilities to expire, in practice the position could be easily rolled over. The mortgage portfolio would be maintained, the current short futures position purchased back before delivery, a new short position taken one period (year) further in the future, and the deposits rolled over. The net return on the new position could be calculated as before, and this return would be set for the new one-year period.
3. Transactions Costs and Margin Requirements. The transactions costs associated with buying and selling futures positions would be trivial for institutions hedging in the way described here. Margin requirements are more complicated since futures positions are marked to market, meaning that gains and losses on the position are settled daily (as the futures price changes), and the institution must be prepared to deposit cash if interest rates decline and it thereby suffers a loss on the short position. The issue here only concerns cash flow, since gains or losses on the futures position are necessarily offset by gains or losses on the portfolio position. But the institution must provide for the possibility of such margin calls.
4. Basis Risk. Many institutions would use conventional mortgages rather than GNMA passthroughs as the underlying portfolio instrument. Since futures markets do not exist for conventional mortgages, the hedge with GNMA futures is imperfect. The risk is that the price of the conventional mortgage maintained in portfolio could move over time relative to GNMA passthrough prices. This differential movement is basis risk in the jargon of futures markets. While some basis risk can usually be tolerated, this is a potential problem especially over short-run periods.
5. Prepayments of Principal. The prepayment of principal on mortgages held in portfolio also complicates the hedging strategy. The problem is that the futures market contract calls for delivery of a fixed principal amount, while the principal of the underlying portfolio asset may be reduced if prepayment occurs. Particularly in a period of declining interest rates, losses would occur on the futures position, but the gain on mortgages held in portfolio would be reduced due to prepayments. Of course, the problem could be anticipated, and a smaller volume of short positions taken, but this would

require a forecast of interest rate levels. Alternatively, options markets for interest rate contracts are soon to be introduced, and they offer an intriguing solution to this and related problems. The appropriate strategy here would be to buy GNMA call options at various interest rate levels, in order to "call" back the mortgages in portfolio lost through prepayment.

Finally, there is the question of whether such hedging strategies should be applied to an institution's existing mortgage portfolio, its newly originated mortgages, or both. Hedging the existing portfolio locks in its value at current prices, which are significantly below par for most institutions. On the other hand, not hedging the existing portfolio could lead to even further losses were interest rate levels to rise further. A reasonable compromise may be to hedge only newly originated mortgages, thereby precluding any additional exposure, while hoping to recapture some or all of the capital value of the existing portfolio. But, in fact, the "right" decision here depends on the risk-bearing attitudes of the management.

Mortgage Banking Strategies

Mortgage banking by S&Ls contrasts with portfolio lending in that the originated mortgage is sold in the secondary market, rather than placed in the institution's portfolio. The attraction of mortgage banking for S&Ls is that they can continue to take advantage of their expertise and experience in mortgage origination, without facing the interest rate risks of a portfolio lender. Also, many institutions find the stable fee and related income associated with mortgage banking attractive compared to the risks of maturity intermediation as carried out by the traditional S&L portfolio lender.

However, interest rate risks remain for the mortgage banker, even though no long-run asset position is taken. The risks arise because mortgage bankers have traditionally provided borrowers with 90-day, fixed rate, commitments that are only later taken down as mortgages. The borrower has the option of using (taking-down) or not using the commitment during this period. The borrower's decision to take down the commitment depends on whether a suitable house is found and the sale made, and on the course of interest rates between the time the commitment was made and the time take-down is considered. The mortgage banker's interest rate risk occurs if interest rates rise during this decision period, and borrowers take down the commitments. A loss occurs then both because the mortgages are made at below market rates, and because more than the normal number of mortgages are likely to be taken down.

One set of available solutions concern changing the nature of the commitment itself. For example, since the key problem is the fixed rate aspect of the commitment, flexible rate commitments would eliminate much of the risk for the mortgage banker. Similarly, reducing the commitment time span would reduce the period during which the mortgage banker is exposed to rate fluctuations. The problem with such adjustments in the commitment contract is that the borrower has no advantage relative to the

lender in bearing the interest rate risk. The same issue arose, of course, with adjustable rate mortgages discussed above. And the solution is also the same—namely the use of futures and options markets to sell the risk to third parties.⁵

The hedging strategy for a mortgage banker issuing fixed rate commitments is similar to those discussed above for the portfolio lender. The mortgage banker's problem, however, is more complicated because the underlying position being hedged—the commitment to the borrower—is itself an option. Specifically, the mortgage banker has sold the borrower a put option. A short position in a futures contract would not hedge the mortgage banker because if interest rates fall, he would lose on the futures position, while there would be no gain on the option to the borrower—borrowers simply would not take down the commitments.

As noted above, trading in GNMA interest rate option contracts will soon begin, and in principle these contracts provide the hedge required by the mortgage banker. Indeed, it might appear that option hedging by mortgage bankers would be fully analagous (and as complete) as futures hedging by portfolio lenders. Unfortunately, there is another complication for the mortgage banker, even if option markets exist.

The problem is that not all of the commitments are generally taken down, and the percentage that is taken down is sensitive to interest rate changes. For example, mortgage bankers may experience a take-down rate of 50 percent in periods of stable rates, but the rate may rise to 75 percent if interest rates rise by a percentage point during the commitment period. One solution is to buy option hedges to cover the extreme possibility of take-down, even 100 percent if necessary. The catch is that the mortgage banker must pay the market price for each option, and these costs will be wasted if the option proves unnecessary. Or to put it another way, a mortgage banker "playing it safe" by buying full option coverage would find he is at a competitive disadvantage with respect to other mortgage bankers that accept more limited coverage, and thereby can charge lower fees to borrowers.

This situation raises another aspect of the hedging question for the mortgage banker. In perfect markets, one would expect mortgage bankers to pass through the costs of a fully hedged position to the borrower in the form of commitment fees. But mortgage bankers can "self-insure" the interest rate risk, simply by not undertaking the hedging actions. Presumably such mortgage bankers would still charge the standard fees, and thus receive an extra return for their willingness to bear this risk themselves.

It is my impression that the mortgage banking commitment market has not worked quite this way. Many mortgage bankers, it seems, have self-insured not intentionally but because they could not evaluate the extent of their risk position, or because, in the absence of organized options markets,

⁵Mortgage bankers can also hedge their position by selling the anticipated originations on a forward basis to final holders. This can be difficult, however, and exposes the mortgage banker to the risk that declining take-down ratios will leave him without adequate originations to fulfill the forward commitment in periods of declining interest rate levels.

it was not easy to hedge the position. Moreover, it appears that the fees for such commitments were set substantially too low, reflecting the mortgage banker's out of pocket expenses for hedging (which were low if self-insurance was used), rather than the market price that should have been associated with the level of risk being accepted. In any case, I expect that trading of interest rate options, and market determination of the price, may help mortgage bankers in determining the appropriate fee to pass onto borrowers.

For S&Ls, mortgage banking, particularly with hedging techniques available, and rational pricing of commitment fees, provides an interesting strategy through which they can use their expertise in mortgage lending without facing themselves the difficulty of a portfolio lender. Final holders for the mortgages, of course, must be found, and I expect that increasingly the art of mortgage banking will lie in selling the contracts to final holders. This is consistent with extending the secondary market for mortgages discussed in the previous section.

Conclusions

It should be noted that I have not discussed a variety of topics generally associated with the future form of S&Ls, such as consumer finance and consumer service centers. To be clear, these and related developments could be extremely important for many S&Ls, especially if they provide steady streams of fee income and short-term lending opportunities. Also, such functions could complement mortgage-lending programs, for example by helping S&Ls gain access to low-cost deposits, or by sharing the institution's expertise in mortgage lending as illustrated by second mortgage programs. But, generally an institution's strategy for long-term, first lien, mortgage lending will be determined independently of these considerations.

Summarizing the main theme of the paper, I see the S&L mortgage strategy choice between portfolio lending with interest rate risk hedged in future markets, and mortgage banking with its commitment position appropriately hedged. The main question with regard to hedged portfolio lending is whether adequate return-cost spreads can be obtained. S&Ls should look to higher mortgage rates, rather than lower deposit costs, if sufficient spreads are to materialize. The role of mortgage banker is perhaps currently even more attractive to S&Ls, and some major institutions have been moving dramatically in this direction. The question mark here concerns the mechanism through which originated loans would be successfully sold to final holders.

Admittedly, many observers would rank adjustable rate mortgages as a key factor in future S&L mortgage lending. Currently, adjustable rate mortgages are the primary lending vehicle for many institutions. But I suspect that with the first major recession, and/or major decline in interest rate levels and a return to an ascending yield curve, these instruments will look much less attractive.

Of course, the truth is likely to lie between the extremes, and these alternative strategies may be better viewed as complements than as substitutes. As just one example, a mortgage banking institution that is innovating new contract forms is likely to find it extremely convenient to "warehouse" the first "products" of a new run in its own portfolio, until a secondary market for the instrument is established. But whatever the final form, hedging interest rate risks, and innovating secondary market trading, will be the hallmarks of successful S&L mortgage lending in the 1980s. The anticipated large demand for mortgage borrowing during the 1980s makes continued S&L specialization in mortgage lending attractive whether it is portfolio lending based on rising relative mortgage rate levels, or mortgage banking based on high activity levels and stable fee income.

Discussion

Edward H. Ladd*

Let me start by saying I agree with all of Dwight Jaffee's major assumptions. I suspect that deposit costs for thrift institutions will not be below market rates in the future. In fact, I am impressed that with the offering of daily compounding on the new 2½ year Small Savers Certificate, thrift institutions are paying about 200 basis points above Treasury yields, substantially above market rates. Secondly, I would concur that both interest rate levels and the shape of the yield curve are likely to be unpredictable. I find various persuasive evidence for this. If thrift institutions had demonstrated any predictive powers in the past, we would not be in the mess we are in today. Lastly, I agree with Dwight's critical assumption that thrift institutions should not take short-term liabilities and invest in long-term assets. It is apparent to us all that thrift institutions have a profound asset/liability mismatch. I should report to you that I am one of the more devout asset/liability matchers in the Western world, and I regard the continuation of any policy that exacerbates the existing mismatch as being irresponsible and imprudent.

With that background, I found Dwight's proposals on mortgage policy to be interesting and useful. I have no major dissent from his recommendations; however, I believe that each of his proposed policies has some minor flaws, and I suggest that his mortgage policies in general fall short of the strategic solution necessary to assure the survival of thrift institutions.

In his paper, Dwight comments on the adjustable rate mortgage and suggests that this instrument has some significant defects. I agree with his thesis but for a somewhat different reason. He argues that the necessity of having negative amortization on an adjustable rate mortgage creates a default risk. Furthermore, he is concerned that the smart consumer is going to take advantage of the thrift institution lender during periods of declining rates and that thrifts may end up with two 8 percent mortgages, the old fixed rate 8 percent mortgage and the new variable rate mortgages which will decline to 8 percent as interest rates recede. I believe that the default risk can be cured simply by using a larger initial downpayment. That's as good a way to ration new mortgage demand as any. Furthermore, if one is a devout asset/liability matcher, one is less concerned if interest rates on a variable rate mortgage float downward because presumably the cost of deposits will be receding at the same time. An 8 percent variable rate mortgage isn't so bad if money market certificate costs have descended to 6 percent.

However, I think some other pitfalls to the variable rate mortgage deserve to be mentioned. First, in view of the necessity to match the very

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short-term deposits of thrift institutions, particularly the money market certificates, an exceptionally sensitive mortgage instrument with a high degree of flexibility is needed. It will be necessary, I believe, to have negative amortization and a larger downpayment. In many of the discussions of variable rate mortgages with negative amortization, the assumption is that as accelerating inflation drives interest rates higher and adds to the negative amortization on the loan, that same inflation will propel housing prices upward and preserve the loan-to-value ratio. I don't think that proposition follows. In fact, I can conceive of circumstances (such as at present) when high interest rates are undermining the financial stability of the thrift institutions, resulting in a reduction in mortgage availability and a decline in housing prices in the face of persistent inflation.

To go back to my original point, however, an exceptionally flexible variable rate mortgage is needed to match the liability. Even if we are able to create that vehicle, it is possible that thrift institutions will be unable to enforce that contract. We are all aware of the recent example of the Buffalo Savings, which had a variable rate mortgage but was unable to raise interest rates due to borrower and public outcries. Having a long tradition of variable rate mortgages is one thing, but our long tradition of fixed rate mortgages in the United States is inevitably going to produce some adverse public reaction as interest rates rise. We have also had a history of retroactive regulatory rule making, and it would not be entirely surprising if variable rate mortgage contracts were subject to significant regulatory criticism.

Perhaps even more significant, at current interest rate levels, with all of the questions of housing affordability and the necessity of an appropriate downpayment, a lack of mortgage demand may simply limit the variable rate mortgage to a minor portion of the asset structure of thrift institutions.

Lastly, and I believe most important, no secondary market for variable rate mortgages exists at present due to the lack of standardization. Freddie Mac and Fannie Mae have fumbled the ball by authorizing almost every conceivable variable rate mortgage instrument. The resulting lack of standardization has inhibited the creation of a secondary market. Thrift institutions need considerable flexibility. Their future cash flows are uncertain, they need to have the option to rearrange their asset structure, and I suggest that it is critical that any asset they take on the books have a secondary market in order to provide appropriate flexibility. Perhaps a secondary market for variable rate mortgages will develop in time, but it does not exist at present. Thus, I agree that there are pitfalls to the adjustable rate mortgage, although I am concerned about somewhat different flaws than Dwight Jaffee has indicated.

One of Dwight's principal mortgage policies is to have thrift institutions originate mortgages and hedge the interest rate risk by shorting financial futures. This again is a constructive proposal, but I have a number of concerns.

First is the question of whether thrift institutions should hedge just the new mortgages that they are putting on their books. Hedging, in effect, fixes the return on the mortgage instrument. My concern here is that if one

fixes or stabilizes the return, thrift institutions eliminate the opportunity to win or lose on the new mortgages. If they are going to lose on the old mortgages and isolate themselves from any recovery potential on the new mortgages, the result will be a net loss. I believe that the policy of hedging just the new mortgages will produce a slide toward insolvency, which may proceed more slowly but with greater inevitability.

A second possibility is to hedge both the old and the new mortgages. However, at current interest rate levels, this will lock the thrifts into unprofitability and seal their fate.

Third, I have a concern which perhaps Dwight can address, namely the scale of shorting of financial futures if thrift institutions follow his advice. At present, we are originating about \$100 billion of new mortgages every year, and there are roughly a trillion dollars of outstanding residential mortgages. If all thrift institutions follow his recommendation, there are going to be many sellers, and the obvious question is, "Will there be enough speculators to buy the futures from the thrift institutions?"

Last, I have had some modest experience with futures in creating a one-year asset by buying a long-term Treasury or mortgage and shorting appropriate futures against the instrument. The result is to eliminate the interest rate risk. I have calculated the returns on these transactions, and they have produced results somewhat better than the yields on comparable maturity Treasuries but worse than what I could obtain on commercial bank CDs. This is not surprising. There is an obvious relationship between risk and return and, if one eliminates the interest rate risk by shorting a future against an asset, a significant reduction in return is quite likely. Therefore, I suspect that the policy of shorting futures against longer-term assets will create a return which will be insufficient to offset the expenses of thrift institutions, especially considering the drag from older assets. I conclude that the usage of financial futures is an interesting policy, but falls far short of the strategic solution.

Dwight's second major mortgage policy is to have thrifts engage in a mortgage banking function by originating fixed rate mortgages and selling them. Here again, I have a variety of concerns. Who will buy these long-term fixed rate mortgages? I believe that we are in a financial crisis. It is not the sort of crisis which results in a short-term panic but rather is longer term, the sort of drip method of torture of very high interest rates we have experienced in recent years. This crisis reflects a flight from financial assets, particularly longer-term assets. Even if all thrift institutions agreed to originate and sell fixed rate mortgages, I think it is very questionable whether there would be enough buyers to absorb the mortgage flow.

One might suspect that the life insurance companies would be major buyers. However, I have done some work for some major insurance companies that have consulted me because of my thrift institution experience. They believe that with the long-term assets and shortening liabilities of life insurance companies, the life industry is on the same track as the thrift industry, but with a four- or five-year lag. I don't believe that life insurance companies with that understanding are going to be aggressive buyers of long-term fixed rate assets.

Corporate pension funds also might be considered candidates for buying the mortgages, but they have, at least to date, a heavy equity orientation. Furthermore, with cash flow of only \$25 billion a year, they are too small to absorb \$100 billion per year of residential mortgages. Commercial banks have been more aggressive than others at asset/liability matching in the past. That policy has served them so well that I see no reason to believe that they would revert and develop an appetite for long-term fixed rate assets. Finally, it has been suggested that state and local government pension funds might delude themselves into thinking that they can serve both investment and social objectives by acquiring residential mortgages in their own area. However, even if that should occur, state and local pension funds, with cash flow of \$25 billion per year, are also too small to do the job. Thus, I think there remains a major question as to who would buy all of the fixed rate mortgages that thrifts intend to sell.

Secondly, I have a concern about the willingness of those buyers to take the credit risk. In the past, the secondary market has grown dramatically, as Dwight pointed out in his paper. However, this has been facilitated by government guarantees which are now being withdrawn. Into this vacuum will step private mortgage insurance, but I am concerned about the quality of that insurance. Unlike life insurance, where reasonable assumptions on individual mortality produce a dispersion of risk, private mortgage insurance covers an undiversified national market. If the mortgage market gets in trouble due to external events, such as interest rates or the failure of thrift institutions, virtually the whole mortgage market is likely to be affected at the same time. Thus, I argue that private mortgage insurance falls far short of the insulation from credit risk provided by the government guarantee and that many of the mortgages which will have to be sold into the secondary market in the future will be uninsured mortgages with an increasing credit risk.

Thirdly, I suspect there is a tactical and perhaps a strategic problem if thrifts try to market fixed rate mortgages at the same time they are trying to induce borrowers to switch to some sort of variable rate instrument. The introduction and acceptance of the variable rate mortgage could be seriously hampered or delayed by consumer confusion.

Lastly, I think there is a sense among thrift institutions that the origination and sale of mortgages not only pass onto some other investor the burden of the longer-term asset, but also permits the thrift to enjoy the high profitability of the service contract. I believe that this is a seriously flawed concept. If we step back for a moment and think about that service contract, we note that it is indeed a 30-year contract. The costs of servicing the mortgages are fairly labor intensive and are likely to rise with inflation. Furthermore, the costs are closely related to the numbers of mortgages serviced rather than to the principal amount. Thus, costs are likely to rise dramatically on a package of mortgages over the life of the servicing contract.

On the other hand, the servicing revenues are related to the principal value of the mortgages outstanding, which will be paid down as amortiza-

tion proceeds. Thus, I believe the servicing contract is a time bomb which appears to be profitable at first but which contractually will result in considerably higher expenses and significantly lower revenue as time passes. I know some thrift institutions have done some modeling of servicing and found that while the next 10 years look good, the subsequent 10 years look very bad, and the 10 years after that look disastrous. I don't mean to downplay the importance of originating and selling mortgages, particularly if points can be obtained on the front end, but I do wish to suggest that the servicing prospect may not be nearly as desirable as some institutions think.

If, as a result of my analysis, you agree that all of the various proposals are flawed to some degree, you will undoubtedly question whether thrift institutions really wish to remain heavily dedicated to the mortgage business. My answer is no for a variety of reasons. First, the thrifts are in the mortgage business now with a substantial portion of their assets, and in view of the very slow turnover of existing mortgages, they will inevitably be stuck with the large mortgage exposure for the foreseeable future. Thrifts couldn't get out if they wished to. In view of the current problems of the mortgage instrument and the prudence of diversifying one's assets, I think continuing the past policy of allocating a very substantial portion of the asset structure to mortgages is seriously questionable.

Further, at current interest rates, housing is simply not affordable for a substantial portion of the American population, and mortgage demand is going to be relatively low. Several weeks ago, I had an opportunity to address a convention of realtors in Maine, and, while I am not terribly sure of my facts, my impression is that the average family income in Maine is roughly \$20,000. Using prevailing lender standards, this would justify a \$21,000 mortgage, which would buy a \$25,000 house, of which there aren't any. This example points up the basic conflict between current family income and housing affordability, and I conclude that unless something changes dramatically, there will not be enough mortgage demand to fill up a significant portion of the thrift institution asset structure.

In terms of national objectives, it seems to me that the need for housing is fading. I don't deny it will remain important over the longer run, but there are many other priorities as well. David Stockman has reportedly said (and if he didn't say it, I will) that our houses are too big and our factories are too old. Certainly, the political clout of housing has lost momentum in recent years.

Then lastly, Dwight Jaffee's paper carries the implicit assumption that we *need* to find a way somehow to continue mortgage lending. Not necessarily. I argue that the past inflation has ravaged the capital formation process. One of the results of that capital formation problem, as well as the current policies of the Federal Reserve, is to squeeze out some important sectors of the market. I suggest that the Treasury will get its money, that federal agencies will get their money, that major corporations will be able to borrow, and that most state and local governments will also obtain necessary funding. The mortgage market, in my judgment, is last in line, like it or not, and I think it is very questionable in view of the pressures on capital

formation, that we *need* to stretch far enough to honor this relatively low priority borrower.

As we turn from the nation's needs to the needs of thrift institutions themselves, I suggest that *thrifts* do not need more mortgages. What they do need are very short-term assets. The problem with mortgages is that housing is a long-term asset which should, under ordinary circumstances, be financed with longer-term money. The thrifts also need a very profitable, flexible asset. Housing finance, on the other hand, is a very politically sensitive subject, with substantial consumer protection and a high degree of regulatory visibility that may interfere with the development of a profitable, flexible asset. I fear that the transition in the thrift industry toward very short-term profitable, flexible assets will not happen quickly enough, and that there will not be sufficient time for thrifts to move from their traditional roles to their necessary future structure.

The resulting pressures on thrift institutions cry out for some sort of external or macroeconomic solution. There are two areas which I believe are particularly pressing. The first concerns deposit deregulation and the Depository Institutions Deregulation Committee (DIDC). I don't want to be too critical, but it is my strong conviction that in the initial actions of the DIDC, the policy has been very badly executed. I believe that the regulations have been adopted in a sloppy fashion, and the decisions have been ill thought out. The DIDC's decisions have resulted in sharp cost increases to an industry which is already suffering dramatic losses. I was pleased when the passbook savings rate was rolled back. More important, the DIDC is encouraging unregulated wild card deposits. It is difficult, if not impossible, for the industry to make the transition from a regulated status to unregulated deposit rates without some substantial disarray. At present, we are observing desperate thrift institutions paying uneconomic rates in order to garner the last dollar of liquidity. Their stronger competitors are forced to follow, with the result that deposit deregulation is resulting in ruinous, self-destructive competition, abetted by the DIDC.

Lastly, and perhaps most alarming, the DIDC is encouraging a steady shortening of deposit lives, thereby compounding the asset/liability mismatch. We have a classic case in the new regulations on the 1½ year IRA deposit. We start out with the individual retirement account designed to encourage very long-term savings. Despite this long-term aspect, we have established a 1½ year maturity and, if I understand the regulations correctly, authorized thrift institutions to float that 1½ year deposit on a monthly, weekly or even daily basis related to any sort of open market instrument. The result is that thrifts will not only be forced to pay uneconomic rates in a highly competitive environment, but more important, will be contracting the life of their liability. I am staggered that we have created an instrument designed to foster long-term savings which ends up being a day-by-day liability.

In this context, I conclude that deposit deregulation is a failure. It sounds nice, but it is a disaster. Until DIDC changes the thrust of its policy, it is part of the problem rather than part of a solution. At the very time

when thrift institutions are having difficulty adjusting to a change in strategy, are incurring unacceptable operating losses, and are suffering from a profound asset/liability mismatch, the DIDC is adding to the confusion, compounding the costs and shortening the liability lives. I find it ironic that the chairman of the FDIC, the man who more than anyone else is allegedly responsible for the safety and soundness of the banking system, is an active participant in the creation of DIDC policies.

I consider myself a temperate person, and I have chosen my next words carefully: I believe that the DIDC is displaying a degree of irresponsibility unparalleled in the regulation of financial institutions in the postwar period.

Another macroeconomic or external solution that is required is a decline in interest rates. The Federal Reserve and the administration's objectives are laudable. Maybe the policies will work; maybe they will not. However, if interest rates don't decline soon, I worry that the interest rate levels will break the system, with very harmful consequences. We cannot afford a massive collapse of the thrift institutions. In addition, there is a substantial risk that continuation of current interest rate levels will produce a political backlash which will be counterproductive to the long-run conduct of economic policy and the achievement of lower rates of inflation. I therefore suggest that if interest rates don't decline soon, the Federal Reserve and/or the administration will have an even larger problem on their hands and will have to find some quite different approach.

In conclusion, I find Dwight Jaffee's paper to be interesting and useful. However, fiddling with mortgages does not seem to me to be the answer to the thrift institution dilemma. In fact, mortgages are probably not the answer. If thrift institutions are to survive, the external environment is the key. Both a change in policy from the recent disasters emanating from the DIDC and significantly lower interest rates will be required. Perhaps it is not necessary to state the fact, but if we are truly interested in mortgages, we must remember that the survival of thrift institutions is a precondition to mortgage lending.